

Checklist of the Belgian ant-fauna (Formicidae, Hymenoptera)

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Abstract

A checklist of all Belgian Formicidae is given. Until 21-06-2001 73 species were reported in Belgium. Ten species are only known from Flanders, twelve species only from Wallonia and eight species are exclusively found in the "Hautes Fagnes". Some species were found only once and their persistent existence in Belgium is therefore doubtful. Collection data, collectors and collection-places of rare and doubtful species are also given.

Flemish, Wallonian and "Hautes Fagnes" region checklist. A checklist indicating which species are known for Belgium, and the recent revival concerning ant-faunistics and taxonomics in Belgium and surrounding countries (Netherlands: BOER, 1999; Germany: SEIFERT, 1996; 1997; Luxembourg and France) hopefully will encourage further studies on ant faunistics in Belgium.

Samenvatting

Een volledige lijst van alle tot op heden in België gevonden Formicidae wordt hier weergegeven. Hieruit bleek dat tot 21-06-2001 reeds 73 soorten in België werden ingezameld. Daarvan zijn tien soorten alleen van Vlaanderen, twaalf soorten alleen van Wallonië en acht soorten enkel van de Hoge Venen gekend. Sommige soorten zijn slechts één keer gevonden wat hen als volwaardige Belgische soort twijfelachtig maakt. Van zelden waargenomen soorten worden hier ook de data, collectors en vindplaatsen weergeven.

Résumé

Une liste complète de toutes les Formicidae trouvées en Belgique est présentée. 73 espèces sont déjà rassemblées en Belgique jusqu'à 21-06-2001. Dix espèces sont trouvées seulement en Flandre, douze seulement en Wallonie et huit sont uniquement trouvées dans les Hautes Faunes. Les espèces trouvées seulement une fois sont cataloguées comme des espèces doutables pour la Belgique. Les dates de collection, les collecteurs et les places de collection des espèces rares et doutables sont aussi mentionnées.

Introduction

The last catalogue that concerned the number of species of ants in Belgium, counted 63 species found at least once in Belgium (PAULY, 1999). In the last decade a lot of new taxonomical insights (SEIFERT, 1991; 1992; 1996 and 1997) suggested that a lot of species would be (re) discovered in Belgium, and so a recent checklist of all species known from Belgium was needed and it was checked to date. Recently eight species were added to the Belgian ant fauna and also some other new and rare species were reported (DEKONINCK & VANKERKHOVEN, 2001; MAES pers. com.; BAUGNÉE, pers. com.). Because of different ecological, soil, climate and management characteristics, literature-studies suggest a difference between a

Material and Methods

The checklist presented here is based on three formerly standard works on ant-faunistics in Belgium (maps from GASPAR, 1970; 1971; VAN BOVEN & MABELIS, 1986; DE BISEAU & COUVREUR, 1994), some recent articles (VANKERKHOVEN, 1999; DEKONINCK & VANKERKHOVEN, 2001) and personal comments from recent investigations on nature management in Flanders. The systematics used here are according to the insights of SEIFERT (1996; 1997). Most of the old material (collection BONDROIT at the KBIN-IRSNB-collection) was checked (except *Coptoformica*-species). Records deduced from the maps of GASPAR (1970-1971) were not checked.

Results and discussion

In the present study all species reported in Belgium so far, are cited and catalogued (Table 1). For rare species the location, collector and collection data are mentioned (Table 2). We divided Belgium into three great regions (Flanders = F, Wallonia = W and the Hautes Fagnes-region = HF) with an ant-species community with at least eight species only found in that region due to differences in ecological, climatic and micro-climatic characteristics of that region. Ten species (*Hypoponera punctatissima*, *Myrmica specioides*, *M. lonae*, *Formica lusatica*, *Lasius sabularum*, *L. meridionalis*, *L. jensi*, *Camponotus vagus*, *Tapinoma ambiguum* and *Stenamma westwoodi*) were only found in or known from Flanders and twelve species are only reported from Wallonia – except Hautes Fagnes – so far (*Manica rubida*, *Aphaenogaster subterranea*, *Messor structor*, *Leptothorax parvulus*, *L. unifasciatus*, *L. tuberum*, *L. interrupsus*, *Plagiolepis vindobonensis*, *Camponotus ligniperda*, *C. pilosus*, *Dolichoderus quadripunctatus*, *Lasius distinguendus*). Eight species were only found in the Hautes Fagnes-region: *Symbiomyrma karavajevi*, *Myrmica lobicornis*, *Camponotus herculeanus*, *Lasius bicornis*, *L. citrinus*, *F. exsecta*, *F. pres-*

Table 1. Checklist of the Formicidae of Flanders, Wallonia and the Hautes Fanges-region:

* – found only once and their persistent presence in Belgium may be catalogued as doubtful;
 ** – recently added to the Belgian ant-fauna and will probably be found more frequently in the future.

Subfamilie	Genus	Subgenus	Species	Flanders	Wallonia	Only found in H F
Ponerinae	<i>Ponera</i>		<i>Ponera coarctata</i> (LATREILLE 1802)	+	+	
	<i>Hypoponera</i>		<i>Hypoponera punctatissima</i> (ROGER 1859)	+	-	
Myrmicinae	<i>Manica</i>		<i>Manica rubida</i> (LATREILLE 1802)*	-	+	
	<i>Myrmica</i>		<i>Myrmica rubra</i> (LINNAEUS 1758)	+	+	
			<i>Myrmica ruginodis</i> (NYLANDER 1846)	+	+	
			<i>Myrmica rugulosa</i> (NYLANDER 1846)	+	+	
			<i>Myrmica sulcinodis</i> (NYLANDER 1846)	+	+	
			<i>Myrmica schencki</i> (EMERY 1894)	+	+	
			<i>Myrmica lobicornis</i> (NYLANDER 1846)	-	-	+
			<i>Myrmica sabuleti</i> (MEINERT 1860)	+	+	
			<i>Myrmica scabrinodis</i> (NYLANDER 1846)	+	+	
			<i>Myrmica speciooides</i> (BONDROIT 1918)**	+	-	
			<i>Myrmica microrubra</i> (SEIFERT 1993)**	+	+	
			<i>Myrmica lonae</i> (FINZI 1926)**	+	-	
	<i>Symbiomyrma</i>		<i>Symbiomyrma karavajevi</i> (ARNOLDI 1930)*	-	-	+
	<i>Anergates</i>		<i>Anergates atratulus</i> (SCHENCK 1852)	+	+	
	<i>Strongylognathus</i>		<i>Strongylognathus testaceus</i> (SCHENCK 1852)	+	+	
	<i>Solenopsis</i>		<i>Solenopsis fugax</i> (LATREILLE 1798)	+	+	
	<i>Formicoxenus</i>		<i>Formicoxenus nitidulus</i> (NYLANDER 1846)	+	+	
	<i>Monomorium</i>		<i>Monomorium pharaonis</i> (LINNAEUS 1758)	+	+	
	<i>Stenamma</i>		<i>Stenamma westwoodi</i> (WESTWOOD 1840)	+	?	
			<i>Stenamma debile</i> (FÖRSTER 1850) **	+	+	
	<i>Aphaenogaster</i>		<i>Aphaenogaster subterranea</i> (LATREILLE 1798)	-	+	
	<i>Messor</i>		<i>Messor structor</i> (LATREILLE 1798)*	-	+	
	<i>Myrmecina</i>		<i>Myrmecina graminicola</i> (LATREILLE 1802)	+	+	
	<i>Tetramorium</i>		<i>Tetramorium impurum</i> (FÖRSTER 1850)	+	+	
			<i>Tetramorium caespitum</i> (LINNAEUS 1758)	+	+	
	<i>Leptothorax</i>	<i>Leptothorax</i>	<i>Leptothorax acervorum</i> (FABRICIUS 1793)	+	+	
			<i>Leptothorax muscorum</i> (NYLANDER 1846)	+	+	
		<i>Myrafant</i>	<i>Leptothorax nylanderi</i> (FÖRSTER 1850)	+	+	
			<i>Leptothorax parvulus</i> (SCHENCK 1852)*	-	+	
			<i>Leptothorax nigriceps</i> (MAYER 1855)	+	+	
			<i>Leptothorax tuberum</i> (FABRICIUS 1775)	-	+	
			<i>Leptothorax unifasciatus</i> (LATREILLE 1798)	-	+	
			<i>Leptothorax interruptus</i> (SCHENCK 1852)	-	+	
Dolichoderinae	<i>Dolichoderus</i>		<i>Dolichoderus quadripunctatus</i> (LINNAEUS 1767)*	-	+	
	<i>Tapinoma</i>		<i>Tapinoma erraticum</i> (LATREILLE 1798)	+	+	
			<i>Tapinoma ambiguum</i> (EMERY 1925)**	+	-	
Formicinae	<i>Plagiolepis</i>		<i>Plagiolepis vindobonensis</i> (LOMNICKI 1925)*	-	+	
	<i>Camponotus</i>		<i>Camponotus herculeanus</i> (LINNAEUS 1758)*	-	-	+
			<i>Camponotus ligniperda</i> (LATREILLE 1802)	-	+	
			<i>Camponotus piceus</i> (LEACH 1825)*	-	+	
			<i>Camponotus vagus</i> (SCOPOLI 1763)*	+	-	
	<i>Polyergus</i>		<i>Polyergus rufescens</i> (LATREILLE 1798)	+	+	
	<i>Lasius</i>	<i>Dendrolasius</i>	<i>Lasius fuliginosus</i> (LATREILLE 1798)	+	+	
		<i>Lasius</i>	<i>Lasius niger</i> (LINNAEUS 1758)	+	+	
			<i>Lasius platythorax</i> (SEIFERT 1991)**	+	+	
			<i>Lasius alienus</i> (FÖRSTER 1850)	+	+	
			<i>Lasius psammophilus</i> (SEIFERT 1992)**	+	+	
			<i>Lasius emarginatus</i> (OLIVIER 1791)**	+	+	
			<i>Lasius brunneus</i> (LATREILLE 1798)	+	+	
		<i>Cautolasius</i>	<i>Lasius flavus</i> (FABRICIUS 1781)	+	+	
		<i>Chthonolasius</i>	<i>Lasius bicornis</i> (FÖRSTER 1850)*	-	-	+

			<i>Lasius meridionalis</i> (BONDROIT 1919) **	+	-	
			<i>Lasius citrinus</i> (EMERY 1922) *	-	-	+
			<i>Lasius umbratus</i> (NYLANDER 1846)	+	+	
			<i>Lasius mixtus</i> (NYLANDER 1846)	+	+	
			<i>Lasius sabularum</i> (BONDROIT 1918) **	+	-	
			<i>Lasius distinguendus</i> (EMERY 1916) *	-	+,?	
			<i>Lasius jensi</i> (SEIFERT 1982) *	+	-	
<i>Formica</i>	<i>Raptiformica</i>	<i>Formica sanguinea</i> (LATREILLE) 1798		+	+	
	<i>Serviformica</i>	<i>Formica fusca</i> (LINNAEUS 1758)		+	+	
		<i>Formica transcaucasica</i> (NASSONOV 1889)		+	+	
		<i>Formica lemani</i> (BONDROIT 1917)		+	-	+
		<i>Formica rufibarbis</i> (FABRICIUS 1793)		+	+	
		<i>Formica cunicularia</i> (LATREILLE 1798)		+	+	
		<i>Formica lusatica</i> (SEIFERT 1997) **		+	-	
<i>Formica</i>	<i>Formica pratensis</i> (RETZIUS 1783)			+	+	
	<i>Formica rufa</i> (LINNAEUS 1761)			+	+	
	<i>Formica polyctena</i> (FÖRSTER 1850)			+	+	
	<i>Coptoformica</i>	<i>Formica execta</i> (NYLANDER 1846) *		-	-	+
		<i>Formica pressilabris</i> (NYLANDER 1846) *		-	-	+
n = 73 species		<i>Formica foreli</i> (EMERY 1909) *		-	-	+

Table 2. Collection dates, collection places and collectors of rare and doubtful species:

* – found only once and their persistent presence in Belgium may be catalogued as doubtful;
 ** – recently added to the Belgian ant-fauna and probably be found more frequently in the future.

Species	Collection places and collectors
<i>Hypoponera punctatissima</i>	Brussels, DESSART & CAMMAERTS (1995) and Leuven, Gelinden VANKERKHOVEN (1999)
<i>Manica rubida</i> *	Liège, BONDROIT (1918) and map 205 GASPAR (1971)
<i>Stenamma westwoodi</i>	STAERCKE, Waasmunster (1938) and Lokeren, DEKONINCK (2000)
<i>Stenamma debile</i> **	Landdunes in Eastern Flanders, DEKONINCK & VANKERKHOVEN (2001)
<i>Messor structor</i> *	Waulsort, BONDROIT (1918) and map 206 GASPAR (1971)
<i>Leptothorax parvulus</i> *	Namen, BONDROIT (1918)
<i>Leptothorax tuberum</i>	Burnot, VAN BOVEN (1977) in DE BISEAU & COUVREUR (1994)
<i>Symbiomyrma karavajevi</i> *	Baraque Michel, VAN BOVEN (1970)
<i>Myrmica lobicornis</i>	Hockay, BONDROIT (1911) and Hautes Fagnes, map 17 GASPAR (1970)
<i>Myrmica speciooides</i> **	Westende-Koksijde, CAMMAERTS & CAMMAERTS (1988) and landdunes Eastern flanders, DEKONINCK (2000)
<i>Myrmica lonae</i> **	Liereman NR, MAES pers. com. (2001)
<i>Myrmica sulcinodis</i>	Stavelot BONDROIT (1911); Koersel, VANBRABANT and map 209 GASPAR (1971)
<i>Plagiolepis vindobonensis</i> *	Marche-les-Dames, VAN BOVEN (1977) in DE BISEAU & COUVREUR (1994)
<i>Camponotus herculeanus</i> *	Hockay BONDROIT (1911); map 211 GASPAR (1971)
<i>Camponotus piceus</i> *	Treignes, Rivellettes, BAUGNÉE (1999) pers. com.
<i>Camponotus vagus</i> *	Tildonk, DEKONINCK & PAULY (1999) pers. com.
<i>Lasius emarginatus</i> **	Fontenoille, CAMMAERTS & CAMMAERTS (1988); Torgny, Diksmuide, Patersberg DEKONINCK (2000, 2001) pers. com.
<i>Lasius bicornis</i> *	Hautes Fagnes BONDROIT (1912); map 213 GASPAR
<i>Lasius meridionalis</i> **	Brecht, Zonhoven, Houthalen and Maasmechelen DEKONINCK & VANKERKHOVEN (2001)
<i>Lasius citrinus</i> *	Map 30 GASPAR (1970)
<i>Lasius sabularum</i> **	landdunes Eastern Flanders, DEKONINCK & VANKERKHOVEN (2001)
<i>Lasius jensi</i> *	St-Pietersberg, DEKONINCK & VANKERKHOVEN (2001)
<i>Lasius distinguendus</i> *	Map 214 GASPAR (1971)
<i>Formica lemani</i>	Koerzel, VAN BRABANT in DE BISEAU & COUVREUR (1994) and Hautes Fagnes-region, GASPAR (1970)
<i>Formica lusatica</i> **	Mechels heide, Maasmechelen DEKONINCK & VANKERKHOVEN (2001)
<i>Formica execta</i> *	Map 26 GASPAR (1970)
<i>Formica pressilabris</i> *	BONDROIT (1912); map 27 GASPAR (1970)
<i>Formica foreli</i> *	BONDROIT (1918)
<i>Dolichoderus quadripunctatus</i> *	Brussels and Profondeville, BONDROIT (1918)
<i>Tapinoma ambiguum</i> **	Houthalen and Maasmechelen, DEKONINCK & VANKERKHOVEN (2001) and MAES pers. com (2000).
<i>Strongylognathus testaceus</i>	Houthalen, Zonhoven, DEKONINCK & VANKERKHOVEN (2001) and Neerpelt (2001) pers. com.
<i>Anergates atratulus</i>	Niel-bij-As, VANBRABANT (1958); Zonhoven, DEKONINCK & VANKERKHOVEN (2001) and Hageven NR Neerpelt (2001) pers. com.

silabris, *F. foreli*. Forty-two species are known from both big parts of the country (Flanders and Wallonia).

So far (21-06-2001) the total checklist of the known Belgian ant-fauna reports 73 species. Sixteen species were found only once and their persistent presence in Belgium may be catalogued as doubtful (marked with a * in Tables 1 and 2). A lot of other species which were recently added to the Belgian ant-fauna still have few records but will probably be frequently found in the future (marked with **). *Lasius distenguendus* mentioned by GASPAR in 1971 (Map 214) could not be checked, and is added here as a doubtful species. We suspect this species could be confused with *L. umbratus*, *L. sabularum* or with other *Chthonolasius*-species.

Some rare and recently added species-records were obtained using pitfall-sampling. This method has already enhanced its

major value in gathering complete data on ant-compositions on sampling sites and has recently revealed some interesting records in Flanders (DEKONINCK, 2000; 2001; LAMBRECHTS *et al.*, 2000). Using this sampling-method during future investigations probably will help to complete and adjust (update) the three different checklists mentioned here.

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